

# DRY STERILISATOR

## ZTP – 368 AS

MANUAL BOOK

CONTROLLED COPY

Thank you for your trust in purchasing our Elitech ZTP368AS Dry Sterisator as a medical equipment sterilizer, Lab, Clinic and so on. For detailed specifications and the sterilizer, please read the following manual before operating the sterilizer.

### **For Users**

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## Chapter 1 Main Technical Specifications of ZTP 368 AS

### 1.1 Normal work environment

#### Operating environment

- a) Temperature :  $+5^{\circ}\text{C} \sim +35^{\circ}\text{C}$
- b) Relative humidity :  $\leq 80\%$
- c) Supply voltage: AC: 220V, 50Hz
- d) Atmospheric pressure : 86 kPa  $\sim$  106 kPa
- e) Power Consumption :  $\pm 1600 \text{ W}$

#### Storage and Transfer

- a) Ambient temperature :  $-10^{\circ}\text{C} \sim +55^{\circ}\text{C}$
- b) Relative humidity:  $\leq 95\%$
- c) Atmospheric pressure : 50 kPa  $\sim$  106 kPa

### 1.2 Main Sterilization Method:

- a) Very concentrated Ozone gas
- b) The wavelength of infrared light produces heat in the temperature range of  $\pm 160^{\circ}\text{C}$

1.3 Ozone generator specifications: Dimensions  $142 \times 60 \times 35 \text{ mm}$ , 10 W

1.4 Ozone concentration : 100 ppm

1.5 One ozone sterilization period:  $\pm 120$  minutes

1.6 Standard resistance to use ozone generator:  $> 1500$  hours

1.7 Preferred Sterilization Method: Ultra-high-intensity light

1.8 Infrared light intensity:  $160^{\circ}\text{C}$

1.9 One sterilization period:  $\pm 60$ -75 minutes

1.10 Standard lamp life:  $> 1500$  hours

1.11 Shelf capacity :  $\pm 7 \text{ Kg}$

1.12 Leakage ground current :  $\leq 0.1 \text{ mA}$

1.13 Earth Resistance :  $\leq 0.1 \Omega$

1.14 1 Minute 1500V Voltage Test Resistance: no breakdown

1.15 Supply voltage: AC 220V

1.16 Electrical Frequency : 50 Hz

1.17 Packing size :  $690 \text{ mm(L)} \times 600 \text{ mm(W)} \times 1720 \text{ mm(H)}$

1.18 Unit size :  $605 \text{ mm(W)} \times 510 \text{ mm(W)} \times 1655 \text{ mm(H)}$

1.19 Total unit net weight: 40 Kg

1.20 Total gross weight of the unit: 45 Kg

## SPECIFICATION

Product model/type		ZTP 368AS
Carrying capacity		368L
Rated voltage		220V
Rated frequency		50Hz
Power Consumption		±1600W
Shelf capacity		± 7 Kg
Unit Dimension		605 × 510 × 1655 (mm)
Net weight		40 Kg
Sterilization with Ozone Generator Dan Drying	Ozone concentration	≥ 100 ppm
	Ozone sterilization period	± 120 Minutes
	Sterilization test results	Sterile (killing log >6)
Infrared Sterilization	Sterilization temperature	160°C
	Infrared sterilization period	± 60 Minutes
	Sterilization test results	Sterile (killing log >6)
Ozone & Infrared Usage Standard Durability		≥ 1500 Hours
Leak Current Test		≤ 0.1 mA
Earth resistance test		≤ 0.1 mΩ
Resistance Test to 1500V voltage, 1 minute		Not transparent
Function test at 180V		Can work normally
Function test at 250V . voltage		Can work normally
Function test at 42°C temperature, 95% RH		Can work normally
Ozone Generator Technical Specifications	High Voltage and High Frequency Module	
	Dimension	142×60×35 (mm)
	Electrical power	30W (2 pieces ozone in total)
Infrared Lamp Technical Specifications	High intensity and stable output power	
	Dimension	345×ø20 (mm)
	Electrical power	1600W (5 pieces of infrared in total)
Protection against Ozone leakage		High Density Silicon Seal
Infrared leak protection		Double layer glass

## Chapter 2 Security Warning

- 2.1 The power supply must be grounded before the sterilizer is operated.
- 2.2 Please disconnect the power supply cable before replacing the fuse.
- 2.3 This appliance is recommended to be operated and stored by trained staff.
- 2.4 The operator should read this manual carefully before operating the sterilizer, and operate the appliance in accordance with the operating regulations.
- 2.5 The design of this sterilizer has good security, but the operator must still pay attention to the warnings of the state and operating conditions of the sterilizer.
- 2.6 Please turn off the sterilizer and unplug the power supply before cleaning and wiping dry.
- 2.7 If the instrument is not used immediately after sterilization, the instrument can be in a tray container which is lined with sterile paper, and covered with sterile cloth or paper. This instrument must be used within 3 hours.
- 2.8 It is recommended to replace the ozone generator module and/or lamp after use for more than 1500 hours, to maintain the effectiveness of sterilization.
- 2.9 The US ZTP 368 sterilizer has passed the tests according to IEC60335 and IEC60601 standards.  
In order to maintain the best performance during use, it is recommended to carry out periodic calibrations to an Elitech service center or an accredited calibration body; such as BPFK (Health Facility Security Center).

## Chapter 3 Maintenance Rules

3.1 Under normal conditions use according to this Sterilizer Instructions for Use, if this sterilizer has some problems, please contact our customer service. The company maintains sales records and customer records for each sterilizer that is guaranteed one year of service from the original date of purchase depending on condition and time.

3.2 Even during the free maintenance period, we charge for repairs for the following reasons:

3.2.1 Errors in use caused by operation outside the instructions for use of the sterilizer.  
(broken lamp due to hitting an instrument, falling, or other faults; ozone generator not working due to splashing water or other faults)

3.2.2 Error caused by falling when the user has left the purchase location.

3.2.3 Errors in preparation, reconstruction, decomposition and others outside of our company standards.

3.2.4 Damage caused by natural disasters for example: fire, flood, earthquake and others.

3.2.5 Damage caused by fluctuations in the electric voltage drastically or outside the standard voltage requirements of the sterilizer.

3.3 In the warranty period, free replacement for spare parts for one year. Except for power cord, stainless rack, lampshade frame, rack holder due to overload, instructions for use and packing load.

3.4 Free maintenance service will be canceled if we find the seal is broken.

3.5 For maintenance costs outside the warranty period, our company recommends continuing to use “Contact Periodic Maintenance”.

## **Chapter 4 Characteristics of the US ZTP 368 Sterilizer**

- 4.1 Dry Sterilization with a maximum power consumption of  $\pm 820$  Watt.
- 4.2 This sterilizer is very easy to use, no special knowledge and expertise is needed for operation, no special supervision & maintenance is needed.
- 4.3 Operation by pressing three buttons only. The sterilization process runs automatically, and the tool can be shut-off when the sterilization process ends.
- 4.4 Practical control panel, easier for operation. The light indicator shows the working status more clearly for observation.
- 4.5 Electrical safety class : Class 1.
- 4.6 The overall shape of the tool is elegant.
- 4.7 According to the working mode class, this tool is included in the tool that cannot work continuously.
- 4.8 Almost all instruments can be sterilized in the Sterilizer, with ozone almost all heat-resistant and non-heat-resistant equipment can be sterilized. For equipment that is not resistant to ozone, such as metal, it can be sterilized with infrared light on this sterilizer.
- 4.9 This sterilizer can be used multi-functionally for various purposes, institutions, clinics, laboratories, hospitals, restaurants, and households. Can sterilize: all medical instruments, salon labs, beauty treatments, tattoos, toys, baby equipment, important documents, eating and drinking utensils.
- 4.10 With the ability of ozone as a super oxidizing agent, various heavy metals, toxins, pesticides, and hazardous chemicals can be decomposed in this sterilizer.

## Chapter 5 Construction and Control Panel ZTP 368 AS

### 5.1 Main construction and names of main components

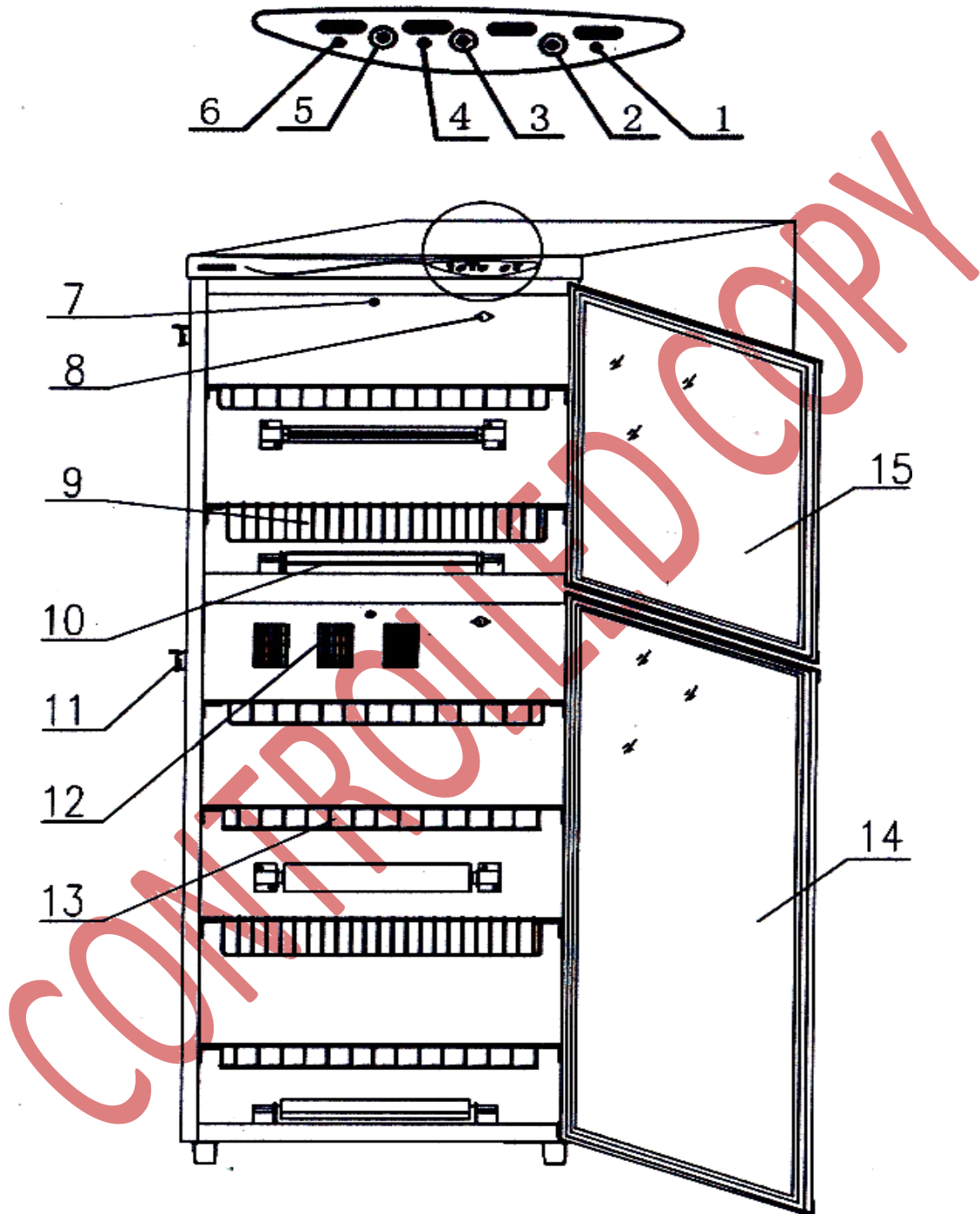





Image of ZTP 368 AS parts

## 5.2 Button Description

- (1) = Power indicator light (green)
- (2) = “STOP” button
- (3) = “LOWER” button (bottom ozone&dry cabinet)
- (4) = Lower cabinet indicator light (yellow)
- (5) = “UPPER” button (top high temperature cabinet)
- (6) = Upper cabinet indicator light (red)
- (7) = Ventilation hole (wind)
- (8) = Thermostat
- (9) = Upper cabinet shelf
- (10) = infrared lamp
- (11) = Door lock
- (12) = Ozone generator
- (13) = Lower cabinet shelf
- (14) = Lower door
- (15) = Upper door

## 5.3 Description The light indicator is on

-  If the green indicator light is on, it means that the sterilization process is in progress
-  if the yellow indicator light is on, it means that the lower cabinet sterilization process is in progress
-  if the red indicator light is on, it means that the upper cabinet sterilization process is in progress

## **Chapter 6 Pay attention before Operation**

- 6.1 Read this user manual carefully before operating to ensure that the Sterilizer can be used safely and effectively.
- 6.2 Installation and maintenance of the appliance must be carried out in accordance with these instructions for use.
- 6.2.1 There shall be no cables or sources of high voltage in the vicinity of the sterilizer.
- 6.2.2 Do not use or store the instrument in a place where the air pressure is too high, the temperature and humidity exceeds the general standard, the ventilation is not good, there is too much dust, there are gases containing salt and alkali and chemical drugs.
- 6.3 This sterilizer must be placed on a flat surface. Place it in a bright place when moving. Avoid excessive vibration and shock.
- 6.4 The AC frequency and rated voltage shall be as required, and have sufficient current capacity.
- 6.5 Please place this sterilizer in a place that is easy to ground.
- 6.6 Before using the sterilizer, remove all instrument rack straps along with their packaging and remove the Warranty Card User Manual and all documents, keep it in a place that is easy to find.
- 6.7 Check all equipment in the sterilization room, whether it is installed properly and correctly and in its place.
- 6.8 Ensure that the mechanical door lock is still functioning properly.
- 6.9 When sterilizing with ozone, alternating purple light on and off is normal, not interference or component damage.

## **Chapter 7 Work Preparation Before Operating the Sterilizer**

7.1 Check whether the Sterilizer is grounded and the cable connection is secure or not.

7.2 Check the appropriate output voltage when selecting AC.

7.3 Ensure that all instruments (equipment) to be sterilized have been thoroughly washed and dried before placing them in the sterilizer.

7.4 Pre-cleaning of instruments using gloves. Instruments are cleaned with a warm soapy water solution in a sink or other suitable container. After that the instrument is rinsed with running water and do it carefully so that the water does not splash.

7.5 Insert the instrument (equipment) into the upper or lower shelf according to the risk category or characteristics of the product being sterilized, there must be sufficient gaps between the instruments (equipment) so that the sterilization results are effective and thorough.

7.6 Instruments can be grouped according to the size of the risk posed to the patient:

Instruments that are classified as high risk are:

Instruments that penetrate the skin, enter sterile body parts, or come into direct contact with injured mucous membranes.

Instruments classified as moderate risk are:

Instruments that are in direct contact with intact mucous membranes.

Instruments that are classified as low risk are:

Instrument used only on intact skin.

7.7 Cotton, gauze, gloves, cloth and the like can be sterilized by placing them in a neat and orderly manner, the cloth is not folded in layers.

7.8 For small instruments, it is requested to provide a tight and evenly porous and thorough instrument rack.

## Chapter 8 Precautions during Use

- 8.1 Note that all instruments (equipment) have been arranged neatly and well, according to product categories and characteristics, there are sufficient gaps between instruments (equipment), do not exceed the load and do not overflow.
- 8.2 Please note that the mechanical door lock is properly installed to avoid ozone and Infra Red leakage.
- 8.3 During sterilization, if excessive ozone leakage is detected, stop the sterilization process immediately, unplug the power supply and contact our service center.
- 8.4 During sterilization, if the lamp flashes for a long time or works abnormally, stop the sterilization process immediately, unplug the power supply and contact our service center.
- 8.5 During the sterilization process, it is forbidden to open the door of the sterilizer to avoid leakage of ozone and infrared, if the door is opened, the ozone sterilization process will stop automatically. Please start the ozone sterilization process from the beginning.
- 8.6 When the ozone sterilization process ends, it is forbidden to open the door of the sterilizer directly, because it can cause a large amount of ozone leakage. It is recommended to wait time for 20 minutes.
- 8.7 Instruments (equipment) made of rubber, copper and their derivatives along with materials that are easily oxidized are not allowed to be sterilized with ozone, it is recommended to use sterilization with Infra Red light to avoid wear and tear or damage due to ozone oxidation.
- 8.8 Ozone sterilization may have a bleaching effect.
- 8.9 Disconnect or disconnect the power cord from the power source after use.
- 8.10 Store the sterilizer and spare parts properly and correctly according to the instructions for use for future use.

## **Chapter 9 Earthing and Electrical Connection to the Sterilizer**

### **Earthing :**

- 9.1 Connect the sterilizer to ground and a power outlet via the three-wire power cord (three-wire plug). The three-wire plug must be inserted into the three-wire cord socket properly.
- 9.2 If a three-wire receptacle is not available, a qualified electrician must install one unit in accordance with KONSUIL or AKLI regulations in Indonesia.
- 9.3 Under no circumstances should remove the grounding conductor from the electric steaker.
- 9.4 Do not use extension cords or adapters of any kind. The power cord and steaker must be intact and undamaged.
- 9.5 Do not use pipelines and others as grounding.
- 9.6 Proper grounding can ensure safety and protect against AC power interference and electromagnetic waves.

### **Electrical Connection to the Sterilizer:**

- 9.7 Ensure that the AC power supply complies with the following specifications: 220-240 V AC, 50Hz.
- 9.8 Connect the power cord/steaker from the sterilizer to a properly grounded/grounded socket.
- 9.9 Make sure the power indicator light on the sterilizer is on.
- 9.10 If the power cord is not properly connected before operating the sterilizer, there is a possibility that the sterilizer is not working properly due to inefficient power input.

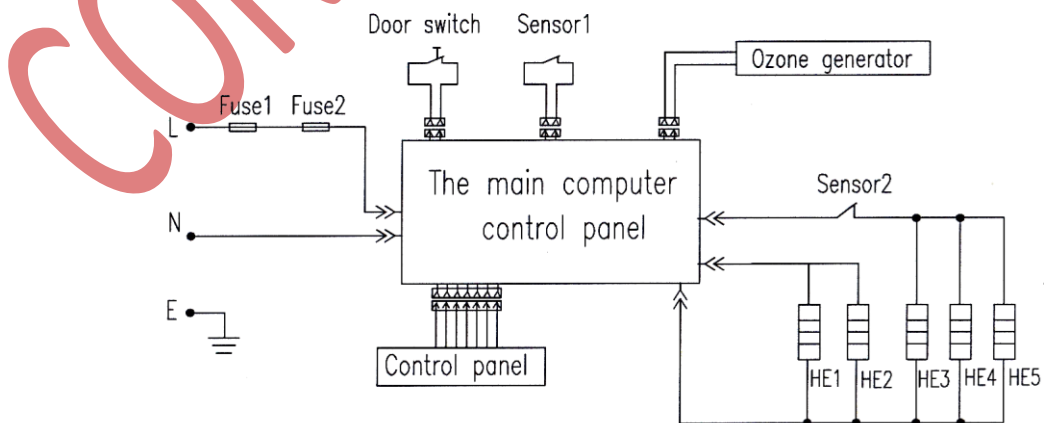
## Chapter 10 Operation of the Sterilizer

- 10.1 Load the item to be processed (both for ozone and sterilization) then close the door and start the process.
- 10.2 Press the button **Upper** to operate the sterile room (upper chamber), the process will stop automatically with a sterilization temperature of 120 C ~ 170 C.
- 10.3 Press the button **Lower** for the operation of the ozone chamber (lower chamber). The process will stop when the sterilization process is complete.
- 10.4 When all processes are complete, let stand  $\pm 20$  minutes for neutralization/cooling.
- 10.5 Press button **off** to stop or cancel the sterilization process at any time if desired.
- 10.6 Use immediately the instrument (equipment) that has been sterilized to avoid recontamination when the instrument (equipment) is removed from the sterilizer.
- 10.7 If the instrument (equipment) that has been sterilized is not used immediately, it can be stored in the sterilizer to maintain the sterility of the instrument (equipment) while in the sterilizer.
- 10.8 Instruments (equipment) that have been stored in the sterilizer for a long time are recommended to be re-sterilized when they are about to be used again.

## Chapter 11 Troubleshooting for User Crashes

No	Problem	Solution
1	Totally dead	<ul style="list-style-type: none"> <li>• Check the electrical connection to the power source</li> <li>• Check the connection of the brown power cable socket with the avometer</li> <li>• Check the connection of the blue power cable socket with the avometer</li> <li>• Check the fuse cable connection with the Avometer</li> </ul>
2	Ozone not working	<ul style="list-style-type: none"> <li>• Check whether the power light indicator is on or not?</li> <li>• Check the door control switch with the plate on the door is pressing properly.</li> <li>• Check normal power supply or not?</li> </ul>
3	Infrared light is off	<ul style="list-style-type: none"> <li>• Check whether the power light indicator is on or not?</li> <li>• Check normal power supply or not?</li> </ul>

### ZTP 368 AS STERILISATOR ELECTRIC LINE DIAGRAMS



## Chapter 12 Care and Maintenance

- 12.1 The buyer is not permitted to open or unpack the contents in the sterilizer. Any maintenance or renewal must be carried out by a trained and authorized professional person from PT. Sinko Prima Alloy. Maintenance must be done with original components from PT. Sinko Prima Alloy.
- 12.2 Please pull out the power supply steaker when the electric power is about to be turned off. If this sterilizer is not used for a long period of time, please unplug the power supply from the power source, then put this sterilizer in a shady, cool and dry place.
- 12.3 Sterilizers should be maintained and cleaned regularly.

How to clean the Elitech Sterilizer as follows:

- a.) First of all the power cord must be disconnected from the power source.
- b.) Prepare a bucket and mix clean water and cleaning agent (liquid soap or neutral detergent) in the right ratio
- c.) Dip a sponge into the bucket and rub it on the outside and inside of the sterilizer chamber and instrument rack
- d.) Dip a cloth into a bucket filled with clean water without cleaning agents then rub it evenly throughout the sterilizer to remove foam and soap residue.
- e.) Use a dry and clean cloth to dry, until the whole Sterilizer is completely dry and clean

## Additional Chapter

In practice, there is no special officer responsible for the decontamination action, all group members play a role in the sterilization and disinfection process. In the public health department, the implementing officers consist of: health supervisors, public health nurses, assistant nurses, midwives and public health doctors. In surgery, group members may consist of general practitioners, room nurses, head of the room, secretaries and receptionists. Routine tasks such as operating the Elitech Sterilizer can be left to someone else. In view of the above, it is necessary to provide the book "Guidelines for Using Sterilizers" and if needed we can provide the book "Practical Instructions for Instrument Sterilization with Elitech Sterilizers and Cross Infection Control".

First of all, it must be understood the meaning and difference of the terms decontamination, disinfection and sterilization. The degree of decontamination desired is determined by the risk posed by the instrument.

**Decontamination:** A general term that describes the method of washing, disinfection and sterilization to remove germs attached to medical equipment.

**Disinfection:** A way to kill vegetative bacteria, viruses and fungi but not to kill spores.

**Sterilization:** A way to kill or destroy all microorganisms and spores attached to medical equipment.

Often there is a misinterpretation of the term above, such as sterilizing with boiling hot water where this method does not kill all spores, viruses and bacteria.

Pre-cleaning is an important part of the decontamination process; If the instrument is not cleaned and rinsed first, blood and other debris will clot and adhere firmly to the instrument. The attached organisms will prolong the decontamination or sterilization process.

Elitech Sterilizing Cupboard / sterilizer brings new innovations in the medical world, in terms of sterilizing medical equipment. With simple technology we made a breakthrough in the field of sterilization of medical equipment. By applying very high concentrations of ozone gas for sterilization and very high intensity light.

Elitech sterilizer fills the need for a sterilizer that is practical, economical, small and safe.

**Profit :**

**Practical:**

☐ No special knowledge required

- ☐ No need supervision
- ☐ No special care needed
- ☐ Simple sterilization Pelaksanaan
- ☐ Almost all equipment can be sterilized with this tool
- ☐ Cloth, gauze, cotton can also be sterilized with this tool
- ☐ With a special wrapping, the instrument is kept sterile for one month
- ☐ Increase mobility for doctors and midwives

**Economical :**

- ☐ Cheap price
- ☐ Practical care
- ☐ The addition of tools other than wrapping is not required
- ☐ Optimum power consumption
- ☐ Optimum electricity consumption, standard operating costs

**Elegant :**

- ☐ Dimensions US ZTP 368 =  $615 \times 530 \times 1653$  (mm)

**Security :**

- ☐ Work without pressure
- ☐ No explosion hazard
- ☐ Electrical installation according to international standards
- ☐ Ozone leakage limit and according to international standards

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